CIRRCULUM VITAE   **R. A. VANAV KUMAR**

25th, September 1977
A178, PARIJATHAM,
A.L.S. Nagar,
Madambakkam,
Chennai-600126, India.
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OBJECTIVE

To work in the environment involving teaching, research and learning process.

ACADEMICS

- Ph.D.,
    - Duration : January 2004 to October 2011.
    - Supervisor: Dr. V. Kumaran, Assoc. Prof.
    - Unsteady boundary layer fluid flow past a stretching sheet

- M.Sc., Applied Mathematics,
    - Duration : June-1998 to May-2000
    - Inst.:Thiagarajar College of Engg., Madurai-625015, India
    - First Class

- B.Sc., Mathematics,
    - Duration : June-1996 to May-1998
    - Inst.:The American College, Madurai-625002, India
    - First Class

RESEARCH, TEACHING AND WORK EXPERIENCE

Over 15 years teaching and research experience

- Probationer, Infonents Systems Private Limited, Madurai, India, August 2000 to Febraury 2001

- Programmer, Jeeva Computers, Madurai, India, Febraury 2001 to August 2002

- Lecturer, Department of Mathematics, V.S.B. Engineering College, Karur, India, August 2002 to November 2003

- Research Assistant/Teaching Assistant, National Institute of Technology, Tiruchirappalli, India, August 2004 to May 2006

- Research Assistant, National Institute of Technology, Tiruchirappalli, India, July 2009 to January 2010

- Assistant Professor, Oxford Engineering College, Tiruchirappalli, India, May 2010 to May 2011.

- Assistant Professor, VIT, Chennai, India, June 2011 to July 2014.
- Assistant Professor, NIT, Arunachal Pradesh, India, Since July 2014.

AREAS OF PROFICIENCY

- Turbo C, Turbo C++, VC++6.0, FORTRAN-77, Microsoft Office Tools, Java, Mathematica-6.0, Matlab-7.0, Dos, Unix and Latex, Exposure to R and Python

- Applied Mathematics – Computational Fluid Dynamics, Engineering Mathematics, Partial Differential Equations, Numerical Techniques, Special Functions, Probability and Statistics, Probability and Random Processes, Fourier Series/Transforms, Discrete Mathematics and MATLAB.

AREA OF RESEARCH

  o Computational Fluid Dynamics

TRAINING AND WORKSHOP ATTENDED

Over 15 Training and Workshop Attended

PUBLICATIONS

7 International Journal (with I. F. > 1) published. Over 10 conference papers presented.

COURSES TAUGHT

Over 20 courses handled for UG, PG and Ph.D., students

ANNEXURE-II

WORKSHOPS, SYMPOSIUM AND CONFERENCE ATTENDED

- Level-O, Mathematics training and talent search programme at IIT, Madras, Chennai, India, 22nd, May, 1997 to 17th, June, 1997.

- Level-I, Mathematics training and talent search programme at IIT, Madras, Chennai, India, 18th, May 1998 to 13th, June 1998.

- Introduction to Partial Differential Equations from 19th December 2005 to 23rd December 2005, at Department of Mathematics, IISC, Bangalore-560012, India.

- Symposium on Nonlinear Evolution Equations from 18th April to 19th April, 2008 at Department of Mathematics, IISC, Bangalore-560012, India.

- Winter School on MODELLING, COMPUTING AND SIMULATION in Engineering, December, 2006 to January, 2007, IIT, Madras, Chennai-600036, India.

- Indo-German Workshop-cum-Lecture Series on Computational Models and Methods Driven by Industrial Problems held between 18-27, November 2008 at Department of Mathematics, Indian Institute of Technology, Madras, Chennai-600036, India.

- Workshop on SOFT COMPUTING from 15th November 2007 to 17th November 2007 at Department of Mathematics, National Institute of Technology, Tiruchirappalli-620015, India.

- One Day Workshop on Introduction to Simulating Complex Predictive System and Bayesian Modeling in Image Processing on 25, January 2008 to 28, January 2008 at Department of Mathematics, National Institute of Technology, Tiruchirappalli-620015, India.

- Two Day Workshop on Computational Fluid Dynamics on 17, September 2007 to 18, September 2007 at Department of Mathematics, National Institute of Technology, Tiruchirappalli-620015, India.

- Thesis preparation using LATEX SOFTWARE organized under TEQIP on 6 and 7 October, 2008, Department of Computer Science and Engineering, NIT, Tiruchirappalli-620015, India.

- National level Workshop on Parallel and Cloud Computing organized by the School of Computer Science and Engineering, VIT Chennai on 25/2/2012.

- One Day Workshop on USING SAGE FOR ENGINEERING MATHEMATICS organized by the Department of Mathematics, School of Advanced Sciences, VIT Chennai on April 28th, 2012.

- National Symposium on Mathematical Methods and Applications(NSMMA 2011) held on 22nd December 2011 at the Department of Mathematics, IIT Madras.

- Two Days workshop on MATHEMATICAL TRANSFORMS EXPLORE AND INNOVATE organized by the School of Electronics and Communication and School of Advanced Sciences, VIT Chennai during September 16-17, 2011.

PUBLICATIONS

2019

- Effect of magnetic field on natural convection of a nanofluid enclosed porous cavity with sinusoidal temperature distribution along the vertical boundary, L. Jino and A. Vanav Kumar, National Conference on Fluid Mechanics, March 2019.

- Flow patterns of a Nanofluid in a porous square cavity with applied Magnetic field along with sinusoidal boundary conditions, A.Vanav Kumar, L. Jino and S. Maity, International Conference on Advanced Scientific Innovation in Science, Engineering and Technology, (pp. 1532), April 2019

- Simulation of nanofluid filled inside a porous square cavity heated partially onthe bottom wall in presence of magnetic field. L. Jino and A. Vanav Kumar, May, 2019, 2nd National Conference on Recent Advances in Science and Technology, Assam Science and Technology university, Guwahati – 13, Assam, May 2019.

- Magnetic field effect on nanofluid suspension cavity by non-uniform boundary conditions. A.Vanav Kumar, L. Jino, M. Berlin and Prases Kumar Mohanty, International Conference on Applied Mechanics and Optimization, AIP Proceedings, June 2019.

2018

CFD Analysis on MHD Flow of Two-fluid Model Blood Rheology in Constricted Arteries, D.S. Sankar, A.K. Nagar, K.K. Viswanathan ; A.V. Kumar, 7th Brunei International Conference on Engineering and Technology 2018 (BICET 2018), 2018 page (4 pp.)

2016
- Unsteady three dimensional flow of Casson liquid film over a porous stretching sheet in the presence of uniform transvers magnetic field and suction/injection, S. Maity, S. K. Singh and A. Vanav Kumar, Journal of Magnetism and Magnetic Materials, 2016

- Mathematical Analysis of Single and Two-Phase Flow of Blood in Narrow Arteries with Multiple Contrictions, D S Sankar, A K Nagar and A Vanav Kumar, Journal of Applied Fluid Mechanics, 8 (4), 871-883, 2016.

2013

- Numerical Simulation of Black Scholes Equations "stretching" Boundary Condition, AIMS10, January 6-9, 2013, Indian Institute of Management, Bangalore.

- Transient behavior of chemical reaction and thermal radiation on mixed convection heat and mass transfer over a stretching sheet in Darcian porous medium with Soret and Dufour effects, MACKIE2013, February 4-6, 2013, Department of Chemical Engineering, Indian Institute of Technology, Madras.

- Heat Transfer effects due to viscous dissipation on unsteady boundary layer fluid flow past a stretching sheet subject to transverse magnetic field, A. Vanav Kumar, M. Kaliyappan, Int. J. Engg. App. Res., Sept-Oct 2013, Vol. 3(5), ISSN 2248-9622.

- Sage package for symbolic computation of series solution of ODEs, Int. J. Engg. App. Res., M. Kaliyappan, A. Vanav Kumar, S. Hariharan, Sept-Oct 2013, Vol. 3(5), ISSN 2248-9622.

- Numerical Simulation of Black Scholes Equations "stretching" Boundary Condition, A. Vanav Kumar, AIMS10, January 6-9, 2013, Indian Institute of Management, Bangalore.

- Finite difference simulation of barrier options, A. Vanav Kumar, Kalyani Desikan, Int. Conf. on Business Anal. and intelligence, 11-13, December 2013, Indian Inst. of Mgmt., Bangalore.

- Numerical Simulations of Black-Scholes equation with step change in boundary conditions, S. Hariharan, A. Vanav Kumar, Indian Finance Conference, 18-19, December, 2013, Indian Inst. of Mgmt., Ahmedabad.

2012

- Unsteady MHD flow past a stretching sheet due to a heat source/sink, A. K. Banerjee, A. Vanav Kumar, V. Kumaran, Dynamical systems and methods. Based on the 3rd conference on nonlinear science and complexity (Luo, Albert C.J. (ed.) et al.), Ankara, Turkey, July 27--31, 2010. Berlin: Springer. 291-299 (2012).

- Transient behavior of chemical reaction and thermal radiation on mixed convection heat and mass transfer over a stretching sheet in Darcian porous medium with Soret and Dufour effects subject to constant mass flux, NSMMA-2012, December 22, 2012, Department of Mathematics, Indian Institute of Technology, Madras.

2011

- Unsteady MHD flow and heat transfer with viscous dissipation past a stretching sheet, V. Kumaran, A. K. Banerjee, A. Vanav Kumar, I. Pop, International Communications in Heat and Mass Transfer, 38(3), 335-339, 2011.

- Transition of boundary layer flow past a stretching sheet due to a step change in applied constant mass flux. (English) V. Kumaran, A. Vanav Kumar, I. Pop, Acta Mech., 216, No. 1-4, 139-145 (2011).

- Impulsive boundary layer flow past a permeable quadratically stretching sheet, V. Kumaran, A. Vanav Kumar, J. Sarat Chandra Babu, Nonlinear science and complexity. Based on the 2nd conference on nonlinear science and complexity (Tenreiro Machado, J. A. (ed.) et al.,), NSC '08, Porto, Portugal, July 28--31, 2008. Berlin: Springer. 191-198 (2011).

2010

- Transition of MHD boundary layer flow past a stretching sheet, V. Kumaran, A. Vanav Kumar, I. Pop, Communications in Nonlinear Science and Numerical Simulation, 15, 300-311, 2010. (Elsevier Publications).

2009

- MHD flow past a permeable stretching sheet, V. Kumaran, A. K. Banerjee, A. Vanav Kumar, K.Vajravelu, Applied Mathametics and Computation, 210, 2009, 26-32. (Elsevier Publications).

2008

- Impulsive Boundary Layer Flow Past a Linearly Permeable Quadratically Stretching Sheet, V. Kumaran, A. Vanav Kumar, J.Sarat Chandra Babu, Conference on Nonlinear Science and Complexity, July 28-31, 2008, Porto, Portugal.

- Unsteady MHD flow past an impulsively started semi infinite vertical flat plate with mass diffusion along with viscous dissipation and thermal radiation, A. Vanav Kumar, V. Kumaran, A. K. Banerjee, Proceedings of the National Conference on Mathematical Modeling in Global Perspective, 144-151, 21-22 August, 2008, Department of Mathematics, Velammal Engineering College, Surapet, Chennai- 600066.

- Effect of viscous dissipation and thermal radiation on MHD unsteady boundary layer fluid flow with mass transfer past a stretching sheet A. Vanav Kumar, V. Kumaran, A. K. Banerjee, Proceedings of the National Conference on Mathematical Modeling in Global Perspective, 152-158, 21-22 August, 2008, Department of Mathematics, Velammal Engineering College, Surapet, Chennai-600066.

- Effect of viscous dissipation and thermal radiation over an unsteady boundary layer fluid flow due to impulsively started vertical plate with variable temperature, A. Vanav Kumar, V. Kumaran, A. K.Banerjee, Proceedings of

International Conference on Digital Factory, August 11-13, 2008, CIT, Coimbatore-641014, India, (39th page in Abstract of the proceedings), 395-402.

ANNEXURE-III

Subjects Taught

S. No.	Subject Name	Number of Times Taught	Credit (wherever applicable)	UG/PG	University
1.	Engg. Mathematics-I	10	Full Course	UG	NIT, Tiruchirappalli/Anna University
2.	Engg. Mathematics-II	8	Full Course	UG	NIT, Tiruchirappalli/Anna University
3.	Engg. Mathematics-III	8	Full Course	UG	NIT, Tiruchirappalli/Anna University
4.	Multivariable Calculus and Differential Equation	2	4	UG	VIT, Chennai
5.	Difference and Differential Equations	1	4	UG	VIT, Chennai
6.	Multivariable Calculus and Differential Equation with MATLAB	3	Lab	UG	VIT, Chennai
7.	Difference and Differential Equations with MATLAB	6	Lab	UG	VIT, Chennai
8.	Discrete Mathematics	12	4	UG/PG	VIT, Chennai/Anna University/NIT, Tiruchirappalli (for PG)
9.	Numerical Methods	4	Full Course	UG	Anna University
10.	Probability and Random Processes	3	4	UG	VIT, Chennai
11.	Probability and Statistics	2	Full Course	UG	NIT,Tiruchirappalli/Anna University/NIT, Arunachal Pradesh

12.	Computational Techniques	2	4	PG	VIT, Chennai
13.	Operations Research	2	4	UG/PG	VIT, Chennai/Anna University
14.	Special Functions and Statistics	1	4	UG	NIT, Tiruchirappalli
15.	Tensor Calculus	3	4	PG	NIT, Arunachal Pradesh
16.	Real Analysis	1	4	PG	NIT, Arunachal Pradesh
17.	Financial Computing	2	4	PG	NIT, Arunachal Pradesh
18.	Mathematical Methods and Programming (C++)	1	4	PG	NIT, Arunachal Pradesh
19.	Advanced Engineering Mathematics	4	4	PG	NIT, Arunachal Pradesh

ANNEXURE-IV

Administrative Activities

S. No.	Role Played	Institute	Duration	From	To
1.	Deputy Warden	V.S.B. Engg. College, Karur (Top 10 Private Engg. College)	9 Months	Aug, 2002	May, 2003
2.	Deputy Warden	NIT, Tiruchirappalli	5.5 years	Aug 2005	Jan 2011
3.	Time Table Committee	VIT, Chennai		June 2013	
4.	Proctor	VIT, Chennai		Since June 2013	
5.	NSD 2013	VIT, Chennai	Organizer	Jan 2013	
6.	NSD 2014	VIT, Chennai	Organizer	Jan 2014	
7.	National Conference in Pure and Applied Mathematics-2013	VIT, Chennai	Committee Member	April 2013	
8.	National Conference in Pure and Applied Mathematics	VIT, Chennai	Organizing Secretaries	April 2014	
9.	Chair, AIMS10, IIMB, Bangalore	IIMB, Bangalore	Chair	Jan 2013	
10.	Hostel Warden	NITAP		August 2014	May 2015

ANNEXURE-VI

CONSULTANCY SERVICES

1. Courses Taught at Cognizant Technological Services, OMR, Chennai .

2. Course Taught at Wipro Technologies, Sholinganallur, Chennai.